

[illegible]

[illegible]

(2) 62  
(3) 192  
(4) 321

DECLARATIONS  
CNX\$CONFIG\_CHANGE - Log configuration change  
SEND\_JBCMSG - Send message to Job Controller



```
0000 1 .TITLE CLUMESSAG - Cluster Event Message Routines
0000 2 .IDENT 'V04-000'
0000 3
0000 4 *****
0000 5
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0000 24 *****
0000 25
0000 26
0000 27
0000 28 ++
0000 29 FACILITY: EXECUTIVE, CLUSTER MANAGEMENT
0000 30
0000 31 ABSTRACT:
0000 32 This module produces operator and console messages when the status
0000 33 of the cluster changes. A primitive version of the code was
0000 34 carved out of the CNXMAN.MAR module.
0000 35
0000 36 ENVIRONMENT: VAX/VMS
0000 37
0000 38 AUTHOR: David W. Thiel CREATION DATE: 30-Aug-1983
0000 39
0000 40 MODIFIED BY:
0000 41
0000 42 V03-004 WMC0001 Wayne Cardoza 17-Jul-1984
0000 43 Add a quorum disk writelocked error.
0000 44
0000 45 V03-003 DWT0214 David W. Thiel 09-Apr-1984
0000 46 Add and delete some messages. Change defaults.
0000 47
0000 48 V03-002 DWT0198 David W. Thiel 23-Mar-1983
0000 49 Add messages for quorum adjustment.
0000 50
0000 51 V03-001 DWT0131 David W. Thiel 23-Sep-1983
0000 52 Remove debugging tool that forces all messages to be
0000 53 broadcast to OPA0. Stop outputting messages about
0000 54 sending or receiving status and when CSB is deleted.
0000 55 Use correct length instruction to fill in
0000 56 CLUMBX$B_DS_VERSION field. Add MEMREQ_MSG message
0000 57 to complement REQJOIN_MSG message.
```

CLUMESSAG  
V04-000

- Cluster Event Message Routines D 6

16-SEP-1984 00:23:47 VAX/VMS Macro V04-00 Page 2  
5-SEP-1984 04:06:59 [SYSLOA.SRC]CLUMESSAG.MAR;1 (1)

0000 58 :  
0000 59 :--  
0000 60

CL  
Sy  
SB  
SB  
SE  
SN  
SY  
SY  
TR  
UN

PS  
--  
\$A  
\$\$  
\$\$

Ph  
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In  
Co  
Pa  
Sy  
Pa  
Sy  
Ps  
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56  
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36  
16

Ma  
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-s  
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70  
49  
Th

```
0000 62 .SBTTL DECLARATIONS
0000 63 ::
0000 64 :: INCLUDE FILES:
0000 65 ::
0000 66 $CLUBDEF ; CLUSTER Block offsets
0000 67 $CLUMBXDEF ; CLUSTER mailbox message format
0000 68 $CSBDEF ; CSB Offsets
0000 69 $IPLDEF ; IPL definitions
0000 70 $MSGDEF ; Mailbox message type codes
0000 71 $SBDEF ; SB Offsets
0000 72
0000 73 ::
0000 74 :: MACROS:
0000 75 ::
0000 76 .MACRO CNX_MSG MSGCODE,BRDFLG,LCLFLG,CLSFLG,TEXT
0000 77 .SHOW BINARY
0000 78 .IF NOT BLANK MSGCODE
0000 79 .WORD CLUMBX$K_'MSGCODE
0000 80 .IF FALSE
0000 81 .WORD 0
0000 82 .ENDC
0000 83 $$$XX= FLG_M_ERROR
0000 84 .IRP X,BRDFLG
0000 85 $$$XX= $$$XX ! FLG_M_'X
0000 86 .ENDR
0000 87 .BYTE $$$XX
0000 88 $$$XX= 0
0000 89 .IRP X,CLSFLG
0000 90 $$$XX= $$$XX ! FLG_M_'X
0000 91 .ENDR
0000 92 .BYTE $$$XX ; Cluster-wide OPCOM broadcast flag
0000 93 $$$YY= 0
0000 94 .IRP X,LCLFLG
0000 95 $$$YY= $$$YY ! FLG_M_'X
0000 96 .ENDR
0000 97 .BYTE $$$YY ! $$$XX ; OPCOM message flags
0000 98 .ASCIC @TEXT@
0000 99 .NOSHOW BINARY
0000 100 .ENDM CNX_MSG
0000 101
0000 102 ::
0000 103 :: EQUATED SYMBOLS:
0000 104 ::
0000 105
00000000 0000 106 MB_W_CODE= 0 ; Mailbox message code
00000002 0000 107 MB_B_BRD= 2 ; OPA0 broadcast flags byte
00000003 0000 108 MB_B_CLS= 3 ; OPCOM cluster message flags byte
00000004 0000 109 MB_B_LCL= 4 ; OPCOM local message flags byte
00000005 0000 110 MB_T_MSG= 5 ; OPA0 broadcast message text
0000 111
00000001 0000 112 FLG_V_NONMEMBER= 1 ; Do if local node is not a VAXcluster membe
00000002 0000 113 FLG_M_NONMEMBER= 1@FLG_V_NONMEMBER
00000002 0000 114 FLG_V_QUORUM= 2 ; Do if local cluster has a dynamic quorum
00000004 0000 115 FLG_M_QUORUM= 1@FLG_V_QUORUM
00000003 0000 116 FLG_V_NOQUORUM= 3 ; Do if local cluster does not have a dynami
00000008 0000 117 FLG_M_NOQUORUM= 1@FLG_V_NOQUORUM
00000004 0000 118 FLG_V_ERROR= 4 ; Do after failing to put message in OPCOM m
```



```
00000010 0000 119 FLG_M_ERROR= 1@FLG_V_ERROR
0000000E 0000 120 FLG_M_ALWAYS= FLG_M_NONMEMBER ! FLG_M_QUORUM ! FLG_M_NOQUORUM
0000000C 0000 121 FLG_M_MEMBER= FLG_M_QUORUM ! FLG_M_NOQUORUM
00000007 0000 122
0000000D 0000 123 BELL = 7 ; ASCII code for bell
0000000A 0000 124 CR = ^XD ; ASCII code for carriage return
0000000A 0000 125 LF = ^XA ; ASCII code for line feed
0000 126
0000 127 ;
0000 128 ; OWN STORAGE:
0000 129 ;
0000 130
00000000 131 .PSECT $$$060, LONG ; R/O Data PSECT
0000 132
0000 133 ;
0000 134 ; Common message prefix
0000 135 ;
20 20 2C 4E 41 4D 58 4E 43 25 0A 07 0000000C 136 PREFIX: .ASCII <BELL><LF>'"CNXMAN, " ; Text to prefix each message
0000000C 137 PREFIX_SIZE= .-PREFIX ; Length of prefix text
0000 138
0000 139 ;
0000 140 ; Message control blocks
0000 141 ;
0000 142
0000 143 CSB_MSG:: CNX MSG ST_NEWSYS, <NONMEMBER,NOQUORUM,QUORUM>, , <MEMBER>, <Discover
0001 000C .WORD CLUMBX$K_ST_NEWSYS
1E 000E .BYTE $$$XX
0C 000F .BYTE $$$XX ; Cluster-wide OPCOM broadcast flag
0C 0010 .BYTE $$$YY ! $$$XX ; OPCOM message flags
20 64 65 72 65 76 6F 63 73 69 44 00' 0011 .ASCII @Discovered system@
6D 65 74 73 79 73 001D
11 0011
0023
0023 144 ACCT MSG::
0002 0023 145 CNCT_MSG:: CNX MSG ST_CN, <NONMEMBER,NOQUORUM,QUORUM>, , <MEMBER>, <Establishe
1E 0025 .WORD CLUMBX$K_ST_CN
0C 0026 .BYTE $$$XX ; Cluster-wide OPCOM broadcast flag
0C 0027 .BYTE $$$YY ! $$$XX ; OPCOM message flags
64 65 68 73 69 6C 62 61 74 73 45 00' 0028 .ASCII @Established connection to system@
20 6E 6F 69 74 63 65 6E 6E 6F 63 20 0034
6D 65 74 73 79 73 20 6F 74 0040
20 0028
0049
0049 146 REACCT MSG::
0003 0049 147 RECCT_MSG:: CNX MSG ST_REC, <NONMEMBER,NOQUORUM,QUORUM>, , <MEMBER>, <Re-estab
1E 004B .WORD CLUMBX$K_ST_REC
0C 004C .BYTE $$$XX ; Cluster-wide OPCOM broadcast flag
0C 004D .BYTE $$$YY ! $$$XX ; OPCOM message flags
73 69 6C 62 61 74 73 65 2D 65 52 00' 004E .ASCII @Re-established connection to system@
69 74 63 65 6E 6E 6F 63 20 64 65 68 005A
6D 65 74 73 79 73 20 6F 74 20 6E 6F 0066
23 004E
0072
0004 0072 148 CNXERROR_MSG:: CNX MSG ST_LOSTCN, <NONMEMBER, NOQUORUM,QUORUM>, , <MEMBER>, <Lost
1E 0074 .WORD CLUMBX$K_ST_LOSTCN
0C 0075 .BYTE $$$XX ; Cluster-wide OPCOM broadcast flag
0C 0076 .BYTE $$$YY ! $$$XX ; OPCOM message flags
```

63 65 6E 6E 6F 63 20 74 73 6F 4C 00' 0077  
74 73 79 73 20 6F 74 20 6E 6F 69 74 0083  
6D 65 008F  
19 0077  
0091  
0005 0091  
1E 0093  
0C 0094  
0C 0095  
6C 20 74 75 6F 2D 64 65 6D 69 54 00' 0096  
69 74 63 65 6E 6E 6F 63 20 74 73 6F 00A2  
6D 65 74 73 79 73 20 6F 74 20 6E 6F 00AE  
23 0096  
00BA  
0000 00BA  
1E 00BC  
00 00BD  
00 00BE  
53 43 20 67 6E 69 74 65 6C 65 44 00' 00BF  
6D 65 74 73 79 73 20 72 6F 66 20 42 00CB  
17 00BF  
00D7  
0006 00D7  
1E 00D9  
00 00DA  
0E 00DB  
66 20 67 6E 69 73 6F 70 6F 72 50 00' 00DC  
20 66 6F 20 6E 6F 69 74 61 6D 72 6F 00E8  
72 65 74 73 75 6C 63 58 41 56 20 61 00F4  
23 00DC  
0100  
0000 0100  
1E 0102  
00 0103  
00 0104  
58 41 56 20 67 6E 69 64 6E 65 53 00' 0105  
62 6D 65 6D 20 72 65 74 73 75 6C 63 0111  
65 75 71 65 72 20 70 69 68 73 72 65 011D  
6D 65 74 73 79 73 20 6F 74 20 74 73 0129  
2F 0105  
0135  
0009 0135  
1E 0137  
0E 0138  
0E 0139  
41 56 20 64 65 76 69 65 63 65 52 00' 013A  
6D 65 6D 20 72 65 74 73 75 6C 63 58 0146  
75 71 65 72 20 70 69 68 73 72 65 62 0152  
73 79 73 20 6D 6F 72 66 20 74 73 65 015E  
6D 65 74 016A  
32 013A  
0008 016D  
1E 016F  
0E 0170  
0E 0171  
72 20 67 6E 69 73 6F 70 6F 72 50 00' 0172

.ASCIC @Lost connection to system@

149 FAILIO\_MSG:: CNX\_MSG ST\_TIMCNX, <NONMEMBER,NOQUORUM,QUORUM>, , <MEMBER>, <Timed-o  
.WORD CLUMBX\$K\_ST\_TIMCNX  
.BYTE \$\$\$XX  
.BYTE \$\$\$XX ; Cluster-wide OPCOM broadcast flag  
.BYTE \$\$\$YY ! \$\$\$XX ; OPCOM message flags  
.ASCIC @Timed-out lost connection to system@

150 DEAD\_MSG:: CNX\_MSG , <NONMEMBER,NOQUORUM,QUORUM>, , , <Deleting CSB for system>  
.WORD 0  
.BYTE \$\$\$XX  
.BYTE \$\$\$XX ; Cluster-wide OPCOM broadcast flag  
.BYTE \$\$\$YY ! \$\$\$XX ; OPCOM message flags  
.ASCIC @Deleting CSB for system@

151 TRYFORM\_MSG:: CNX\_MSG ST\_INIFORM, <ALWAYS>, <ALWAYS>, , <Proposing formation of a  
.WORD CLUMBX\$K\_ST\_INIFORM  
.BYTE \$\$\$XX  
.BYTE \$\$\$XX ; Cluster-wide OPCOM broadcast flag  
.BYTE \$\$\$YY ! \$\$\$XX ; OPCOM message flags  
.ASCIC @Proposing formation of a VAXcluster@

152 REQJOIN\_MSG:: CNX\_MSG , <ALWAYS>, , , <Sending VAXcluster membership request to sy  
.WORD 0  
.BYTE \$\$\$XX  
.BYTE \$\$\$XX ; Cluster-wide OPCOM broadcast flag  
.BYTE \$\$\$YY ! \$\$\$XX ; OPCOM message flags  
.ASCIC @Sending VAXcluster membership request to system@

153 MEMREQ\_MSG:: CNX\_MSG ST\_MEMREQ, <NONMEMBER,NOQUORUM,QUORUM>, , <ALWAYS>, <Receive  
.WORD CLUMBX\$K\_ST\_MEMREQ  
.BYTE \$\$\$XX  
.BYTE \$\$\$XX ; Cluster-wide OPCOM broadcast flag  
.BYTE \$\$\$YY ! \$\$\$XX ; OPCOM message flags  
.ASCIC @Received VAXcluster membership request from system@

154 RECONFIG\_MSG:: CNX\_MSG ST\_INIRECNFIG, <NONMEMBER,NOQUORUM,QUORUM>, , <ALWAYS>, <Pro  
.WORD CLUMBX\$K\_ST\_INIRECNFIG  
.BYTE \$\$\$XX  
.BYTE \$\$\$XX ; Cluster-wide OPCOM broadcast flag  
.BYTE \$\$\$YY ! \$\$\$XX ; OPCOM message flags  
.ASCIC @Proposing reconfiguration of the VAXcluster@



```
69 74 61 72 75 67 69 66 6E 6F 63 65 017E
41 56 20 65 68 74 20 66 6F 20 6E 6F 018A
      72 65 74 73 75 6C 63 58 0196
      2B 0172
      019E
      019E
      001C 019E
      1E 01A0
      0E 01A1
      0E 01A2
6D 20 67 6E 69 73 6F 70 6F 72 50 00' 01A3
20 6E 6F 69 74 61 63 69 66 69 64 6F 01AF
72 6F 20 6D 75 72 6F 75 71 20 66 6F 01BB
6B 73 69 64 20 6D 75 72 6F 75 71 20 01C7
      70 69 68 73 72 65 62 6D 65 6D 20 01D3
      3A 01A3
      01DE
      0007 01DE
      1E 01E0
      0E 01E1
      0E 01E2
61 20 67 6E 69 73 6F 70 6F 72 50 00' 01E3
73 20 66 6F 20 6E 6F 69 74 69 64 64 01EF
      6D 65 74 73 79 01FB
      1C 01E3
      0200
      000A 0200
      1E 0202
      0E 0203
      0E 0204
41 56 20 67 6E 69 74 72 6F 62 41 00' 0205
61 74 73 20 72 65 74 73 75 6C 63 58 0211
6F 69 74 69 73 6E 61 72 74 20 65 74 021D
      6E 0229
      24 0205
      022A
      001B 022A
      1E 022C
      0E 022D
      0E 022E
20 67 6E 69 74 65 6C 70 6D 6F 43 00' 022F
73 20 72 65 74 73 75 6C 63 58 41 56 023B
74 69 73 6E 61 72 74 20 65 74 61 74 0247
      6E 6F 69 0253
      26 022F
      0256
      000F 0256
      1E 0258
      00 0259
      0E 025A
6F 72 66 20 64 65 76 6F 6D 65 52 00' 025B
72 65 74 73 75 6C 63 58 41 56 20 6D 0267
      6D 65 74 73 79 73 20 0273
      1E 025B
      000C 027A
      1E 027C
      027C

155 QUORUM_MSG:: CNX_MSG ST_QUORUM, <NONMEMBER,NOQUORUM,QUORUM>, , <ALWAYS>, -
156               <Proposing modification of quorum or quorum disk membership>
               .WORD CLUMBX$K_ST_QUORUM
               .BYTE $$$XX
               .BYTE $$$XX ; Cluster-wide OPCOM broadcast flag
               .BYTE $$$YY ! $$$XX ; OPCOM message flags
               .ASCII @Proposing modification of quorum or quorum disk membership@

157 JOIN_MSG:: CNX_MSG ST_INIADD, <NONMEMBER,NOQUORUM,QUORUM>, , <ALWAYS>, <Proposi
               .WORD CLUMBX$K_ST_INIADD
               .BYTE $$$XX
               .BYTE $$$XX ; Cluster-wide OPCOM broadcast flag
               .BYTE $$$YY ! $$$XX ; OPCOM message flags
               .ASCII @Proposing addition of system@

158 UNLOCK_MSG:: CNX_MSG ST_ABORT, <NONMEMBER,NOQUORUM,QUORUM>, , <ALWAYS>, <Aborting
               .WORD CLUMBX$K_ST_ABORT
               .BYTE $$$XX
               .BYTE $$$XX ; Cluster-wide OPCOM broadcast flag
               .BYTE $$$YY ! $$$XX ; OPCOM message flags
               .ASCII @Aborting VAXcluster state transition@

159 COMPLETE_MSG:: CNX_MSG ST_COMPLETE, <NONMEMBER,NOQUORUM,QUORUM>, , <ALWAYS>, <Compl
               .WORD CLUMBX$K_ST_COMPLETE
               .BYTE $$$XX
               .BYTE $$$XX ; Cluster-wide OPCOM broadcast flag
               .BYTE $$$YY ! $$$XX ; OPCOM message flags
               .ASCII @Completing VAXcluster state transition@

160 FAILOVER_MSG:: CNX_MSG ST_DROPNODE, <NONMEMBER,NOQUORUM,QUORUM>, <ALWAYS>, , <Remov
               .WORD CLUMBX$K_ST_DROPNODE
               .BYTE $$$XX
               .BYTE $$$XX ; Cluster-wide OPCOM broadcast flag
               .BYTE $$$YY ! $$$XX ; OPCOM message flags
               .ASCII @Removed from VAXcluster system@

161 ADDNODE_MSG:: CNX_MSG ST_ADD, <NONMEMBER,NOQUORUM,QUORUM>, , <ALWAYS>, <Now a VAXc
               .WORD CLUMBX$K_ST_ADD
               .BYTE $$$XX
```

```

        0E 027D
        0E 027E
6C 63 58 41 56 20 61 20 77 6F 4E 00' 027F
72 65 62 6D 65 6D 20 72 65 74 73 75 028B
        6D 65 74 73 79 73 20 2D 2D 20 0297
        21 027F
        0000 02A1 162 SNDSTS_MSG:: CNX_MSG , , , , <Sending status to system>
        10 02A1 .WORD 0
        00 02A3 .BYTE $$$XX ; Cluster-wide OPCOM broadcast flag
        00 02A4 .BYTE $$$XX ; OPCOM message flags
        00 02A5 .BYTE $$$YY ! $$$XX
61 74 73 20 67 6E 69 64 6E 65 53 00' 02A6
65 74 73 79 73 20 6F 74 20 73 75 74 02B2
        6D 02BE
        18 02A6
        0000 02BF 163 RCVSTS_MSG:: CNX_MSG , , , , <Received status from system>
        10 02BF .WORD 0
        00 02C1 .BYTE $$$XX
        00 02C2 .BYTE $$$XX ; Cluster-wide OPCOM broadcast flag
        00 02C3 .BYTE $$$YY ! $$$XX ; OPCOM message flags
74 73 20 64 65 76 69 65 63 65 52 00' 02C4
79 73 20 6D 6F 72 66 20 73 75 74 61 02D0
        6D 65 74 73 02DC
        1B 02C4
        0010 02E0 164 FORCLUS_MSG:: CNX_MSG ST_FORNCLUS, <NONMEMBER,NOQUORUM,QUORUM>, , <ALWAYS>, <Detec
        1E 02E0 .WORD CLUMBX$K_ST_FORNCLUS
        0E 02E2 .BYTE $$$XX
        0E 02E3 .BYTE $$$XX ; Cluster-wide OPCOM broadcast flag
        0E 02E4 .BYTE $$$YY ! $$$XX ; OPCOM message flags
65 6D 20 64 65 74 63 65 74 65 44 00' 02E5
74 6F 6E 61 20 66 6F 20 72 65 62 6D 02F1
74 73 75 6C 63 58 41 56 20 72 65 68 02FD
6D 65 74 73 79 73 20 2D 2D 2D 2D 72 65 0309
        2F 02E5
        0019 0315 165 LOSEQUORUM_MSG::
166 0315 .WORD CNX_MSG ST_NOQUORUM, <ALWAYS>, <ALWAYS>, , <Quorum lost, blocking ac
        00 0317 .BYTE CLUMBX$K_ST_NOQUORUM
        0E 0318 .BYTE $$$XX
        0E 0319 .BYTE $$$XX ; Cluster-wide OPCOM broadcast flag
74 73 6F 6C 20 6D 75 72 6F 75 51 00' 031A
61 20 67 6E 69 6B 63 6F 6C 62 20 2C 0326
        79 74 69 76 69 74 63 0332
        1E 031A
        0011 0339 167 GAINQUORUM_MSG::
168 0339 .WORD CNX_MSG ST_INQUORUM, <ALWAYS>, <ALWAYS>, , <Quorum regained, resum
        1E 0339 .WORD CLUMBX$K_ST_INQUORUM
        00 033B .BYTE $$$XX
        0E 033C .BYTE $$$XX ; Cluster-wide OPCOM broadcast flag
61 67 65 72 20 6D 75 72 6F 75 51 00' 033D
69 6D 75 73 65 72 20 2C 64 65 6E 69 034A
        79 74 69 76 69 74 63 61 20 67 6E 0356
        22 033E
        0013 0361 169 QDCON_MSG:: CNX_MSG ST_GAINDISK, <NONMEMBER,NOQUORUM,QUORUM>, , <MEMBER>, <Estab
        1E 0361 .WORD CLUMBX$K_ST_GAINDISK
        1E 0363 .BYTE $$$XX
```



```

        0C 0364
64 65 68 73 69 6C 62 61 74 73 45 00' 0C 0365
6E 6F 69 74 63 65 6E 6E 6F 63 22 20 0C 0366
20 6D 75 72 6F 75 71 20 6F 63 22 20 0C 0372
        6B 73 69 64 037E
        27 038A
        0012 0366
        1E 038E
        0C 038E
        0C 0390
        0C 0391
        0C 0392
65 6E 6E 6F 63 22 20 74 73 6F 4C 00' 0C 0393
75 71 20 6F 74 20 22 6E 6F 69 74 63 0C 039F
        6B 73 69 64 20 6D 75 72 6F 03AB
        20 0393
        0014 03B4
        1E 03B4
        0C 03B6
        0C 03B7
        0C 03B8
69 64 61 65 72 20 72 6F 72 72 45 00' 0C 03B9
69 64 20 6D 75 72 6F 75 71 20 67 6E 0C 03C5
        6B 73 03D1
        19 03B9
        0015 03D3
        1E 03D3
        0C 03D5
        0C 03D6
        0C 03D7
69 74 69 72 77 20 72 6F 72 72 45 00' 0C 03D8
69 64 20 6D 75 72 6F 75 71 20 67 6E 0C 03E4
        6B 73 03F0
        19 03D8
        0015 03F2
        1E 03F2
        0C 03F4
        0C 03F5
        0C 03F6
6B 73 69 64 20 6D 75 72 6F 75 51 00' 0C 03F7
65 6B 63 6F 6C 20 65 74 69 72 77 20 0C 0403
        64 040F
        1B 03F7
        0016 0410
        1E 0410
        0C 0412
        0C 0413
        0C 0414
69 6C 61 76 6E 69 20 64 61 65 52 00' 0C 0415
20 6D 6F 72 66 20 61 74 61 64 20 64 0C 0421
        6B 73 69 64 20 6D 75 72 6F 75 71 0C 0420
        22 0415
        001A 0438
        1E 0438
        0E 043A
        0E 043B
        0E 043C

        .BYTE $$$XX ; Cluster-wide OPCOM broadcast flag
        .BYTE $$$YY ! $$$XX ; OPCOM message flags
        .ASCIC @Established "connection" to quorum disk@

170 QDDISCON MSG:: CNX MSG ST_LOSTDISK, <NONMEMBER,NOQUORUM,QUORUM>, , <MEMBER>, <Lost
        .WORD CLUMBX$K_ST_LOSTDISK
        .BYTE $$$XX
        .BYTE $$$XX ; Cluster-wide OPCOM broadcast flag
        .BYTE $$$YY ! $$$XX ; OPCOM message flags
        .ASCIC @Lost "connection" to quorum disk@

171 QDRDERROR MSG:: CNX MSG ST_DISKRDERR, <NONMEMBER,NOQUORUM,QUORUM>, , <MEMBER>, <Erro
        .WORD CLUMBX$K_ST_DISKRDERR
        .BYTE $$$XX
        .BYTE $$$XX ; Cluster-wide OPCOM broadcast flag
        .BYTE $$$YY ! $$$XX ; OPCOM message flags
        .ASCIC @Error reading quorum disk@

172 QDWRERROR MSG:: CNX MSG ST_DISKWRERR, <NONMEMBER,NOQUORUM,QUORUM>, , <MEMBER>, <Erro
        .WORD CLUMBX$K_ST_DISKWRERR
        .BYTE $$$XX
        .BYTE $$$XX ; Cluster-wide OPCOM broadcast flag
        .BYTE $$$YY ! $$$XX ; OPCOM message flags
        .ASCIC @Error writing quorum disk@

173 QDWRLEERROR MSG:: CNX MSG ST_DISKWRERR, <NONMEMBER,NOQUORUM,QUORUM>, , <MEMBER>, <Quo
        .WORD CLUMBX$K_ST_DISKWRERR
        .BYTE $$$XX
        .BYTE $$$XX ; Cluster-wide OPCOM broadcast flag
        .BYTE $$$YY ! $$$XX ; OPCOM message flags
        .ASCIC @Quorum disk write-locked@

174 QDINV DAT MSG:: CNX MSG ST_DISKINV DAT, <NONMEMBER,NOQUORUM,QUORUM>, , <MEMBER>, <Rea
        .WORD CLUMBX$K_ST_DISKINV DAT
        .BYTE $$$XX
        .BYTE $$$XX ; Cluster-wide OPCOM broadcast flag
        .BYTE $$$YY ! $$$XX ; OPCOM message flags
        .ASCIC @Read invalid data from quorum disk@

175 QDFORCLUS MSG:: CNX MSG ST_FORNDISK, <NONMEMBER,NOQUORUM,QUORUM>, , <ALWAYS>, <Detec
        .WORD CLUMBX$K_ST_FORNDISK
        .BYTE $$$XX
        .BYTE $$$XX ; Cluster-wide OPCOM broadcast flag
        .BYTE $$$YY ! $$$XX ; OPCOM message flags
```



```
6E 61 20 64 65 74 63 65 74 65 44 00' 043D
75 6C 63 58 41 56 20 72 65 68 74 6F 0449
65 68 74 20 61 69 76 20 72 65 74 73 0455
6B 73 69 64 20 6D 75 72 6F 75 71 20 0461
                                2F 043D
                                0017 046D
                                1E 046F
                                0C 0470
                                0C 0471
49 20 74 75 6F 2D 64 65 6D 69 54 00' 0472
6E 6F 69 74 61 72 65 7D 6F 20 4F 2F 047E
64 20 6D 75 72 6F 75 71 20 6F 74 20 048A
                                6B 73 69 0496
                                26 0472
                                0499
                                0499
                                0499
                                0499
                                0499
                                0499
                                0499
                                0499
                                0499
                                00G00000 188
                                0000 189
                                0000 190
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```
.ASCIC @Detected another VAXcluster via the quorum disk@
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```
176 QDTIMOUT_MSG:: CNX_MSG ST_DISKTIMEOUT, <NONMEMBER,NOQUORUM,QUORUM>, , <MEMBER>, <TI
:WORD CLUMBXSK_ST_DISKTIMEOUT
:BYTE $$$XX
:BYTE $$$XX ; Cluster-wide OPCOM broadcast flag
:BYTE $$$YY ! $$$XX ; OPCOM message flags
:ASCIC @Timed-out I/O operation to quorum disk@
```

```
177 : LOSTMSG_MSG:: CNX_MSG ST_LOSTMSG, <ALWAYS>, <ALWAYS>, , <Lost VAXcluster message>
```

```
178
179 :*****
```

```
180 :
181 : NOTE: The following assumptions are in effect for this entire module.
```

```
182 :*****
183 :
```

```
184
185 ASSUME IPL$_SYNCH EQ IPL$_SCS
186 ASSUME IPL$_SYNCH EQ IPL$_TIMER
```

```
187
188 .PSECT $$$100, LONG ; PSECT for code
```

```
189
190 .DEFAULT DISPLACEMENT, WORD
```

```
0000 192 .SBTTL CNX$CONFIG_CHANGE - Log configuration change
0000 193 :++
0000 194 FUNCTIONAL DESCRIPTION:
0000 195
0000 196 This routine records cluster configuration changes.
0000 197 Currently it simply broadcasts a message to OPA0.
0000 198
0000 199 INPUT PARAMETERS:
0000 200
0000 201 R0 Address of .ASCIC message string
0000 202 R5 Address of CSB or 0
0000 203
0000 204 OUTPUT PARAMETERS:
0000 205
0000 206 NONE
0000 207
0000 208 SIDE EFFECTS:
0000 209
0000 210 All registers (other than R0) are preserved.
0000 211 :--
0000 212
0000 213 CNX$CONFIG_CHANGE::
0000 214 PUSHR #^M<R1,R2,R3,R4,R5,R6,R7,R8,R9> ; Save registers
0004 215 MOVL R0,R8 ; Message control block address
0007 216 MOVL R5,R9 ; Remote node CSB address
000A 217 MOVL G^CLUSGL_CLUB,R4 ; Address of CLUB
0011 218 CLRL R7 ; Status flags mask
0013 219 BBS #CLUB$V_CLUSTER, - ; Branch if cluster member
0018 220 CLUB$L_FLAGS(R4),10$
0018 221 BBCS #FLG_V_NONMEMBER,R7,30$ ; Set non-member flag and branch
001C 222
001C 223 10$: BBS #CLUB$V_QUORUM, - ; Branch if quorum is present
0021 224 CLUB$L_FLAGS(R4),20$
0021 225 BBCS #FLG_V_NOQUORUM,R7,30$ ; Set quorum absent flag and branch
0025 226
0025 227 20$: BISL2 #FLG_M_QUORUM,R7 ; Set quorum present flag
0028 228 30$: BITB R7,MB_B_LCL(R8) ; Send OPCOM a message?
002C 229 BNEQ 40$ ; Branch to send OPCOM a message
002E 230 BRW 100$ ; Skip message to OPCOM
0031 231
0031 232 40$: SUBL2 #<CLUMBX$K_LENGTH+3>8^C3,SP ; Allocate mailbox message buffer
0038 233 PUSHL R4 ; Save CLUB address
003A 234 MOVCL5 #0,(SP),#0, - ; Zero allocated space
0043 235 #CLUMBX$K_LENGTH,4(SP)
0043 236 POPR #^M<R4> ; Restore CLUB address
0043 237 MOVW #MSG$ CLUMBX, - ; Message ID
004A 238 CLUMBX$W_MSGTYPE(SP)
004A 239 MOVW MB_W_CODE(R8), - ; Message subtype
004E 240 CLUMBX$W_SUBTYPE(SP)
004E 241 MOVB #CLUMBX$K_DS_VERSION, - ; Message structure version
0052 242 CLUMBX$B_DS_VERSION(SP)
0052 243 BITB R7,MB_B_CLSTR8) ; Broadcast to cluster?
0056 244 BEQL 50$ ; Branch if no
0058 245 MOVB #CLUMBX$M_BRDCST, - ; Set broadcast bit
005C 246 CLUMBX$B_FLAGS(SP)
005C 247 50$: MOVZBW #CLUMBX$K_LENGTH, - ; Message length
0061 248 CLUMBX$W_LENGTH(SP)
```

03FE 8F BB	0000	214	PUSHR	#^M<R1,R2,R3,R4,R5,R6,R7,R8,R9>	; Save registers
58 50 D0	0004	215	MOVL	R0,R8	; Message control block address
59 55 D0	0007	216	MOVL	R5,R9	; Remote node CSB address
54 00000000 GF	000A	217	MOVL	G^CLUSGL_CLUB,R4	; Address of CLUB
57 D4	0011	218	CLRL	R7	; Status flags mask
04 1C A4 00	0013	219	BBS	#CLUB\$V_CLUSTER, -	; Branch if cluster member
0C 57 01	0018	220		CLUB\$L_FLAGS(R4),10\$	
0C 57 01	0018	221	BBCS	#FLG_V_NONMEMBER,R7,30\$	; Set non-member flag and branch
04 1C A4 1C	001C	222			
03 57 03	0021	223	10\$: BBS	#CLUB\$V_QUORUM, -	; Branch if quorum is present
03 57 03	0021	224		CLUB\$L_FLAGS(R4),20\$	
03 57 03	0021	225	BBCS	#FLG_V_NOQUORUM,R7,30\$	; Set quorum absent flag and branch
57 04 C8	0025	226			
04 A8 57 93	0025	227	20\$: BISL2	#FLG_M_QUORUM,R7	; Set quorum present flag
03 12 002C	0028	228	30\$: BITB	R7,MB_B_LCL(R8)	; Send OPCOM a message?
0095 31 002E	002C	229	BNEQ	40\$	; Branch to send OPCOM a message
0095 31 002E	002E	230	BRW	100\$	; Skip message to OPCOM
5E 00000048 8F C2	0031	231			
04 AE 0048 8F 00 6E 00 2C	0031	232	40\$: SUBL2	#<CLUMBX\$K_LENGTH+3>8^C3,SP	; Allocate mailbox message buffer
	0038	233	PUSHL	R4	; Save CLUB address
	003A	234	MOVCL5	#0,(SP),#0, -	; Zero allocated space
	0043	235		#CLUMBX\$K_LENGTH,4(SP)	
6E 0059 8F B0	0043	236	POPR	#^M<R4>	; Restore CLUB address
	0043	237	MOVW	#MSG\$ CLUMBX, -	; Message ID
02 AE 68 B0	004A	238		CLUMBX\$W_MSGTYPE(SP)	
	004A	239	MOVW	MB_W_CODE(R8), -	; Message subtype
04 AE 01 90	004E	240		CLUMBX\$W_SUBTYPE(SP)	
	004E	241	MOVB	#CLUMBX\$K_DS_VERSION, -	; Message structure version
03 A8 57 93	0052	242		CLUMBX\$B_DS_VERSION(SP)	
	0052	243	BITB	R7,MB_B_CLSTR8)	; Broadcast to cluster?
05 AE 01 90	0056	244	BEQL	50\$	; Branch if no
	0058	245	MOVB	#CLUMBX\$M_BRDCST, -	; Set broadcast bit
06 AE 48 8F 9B	005C	246		CLUMBX\$B_FLAGS(SP)	
	005C	247	50\$: MOVZBW	#CLUMBX\$K_LENGTH, -	; Message length
	0061	248		CLUMBX\$W_LENGTH(SP)	

```

05 53 10 A4 D0 0061 249      MOVL  CLUB$LOCAL CSB(R4),R3 ; Local CSB address
1C A4 00 E1 0065 250      BBC    #CLUB$V_CLUSTER, - ; Branch if not a cluster member
08 AE 4C A3 D0 006A 251      MOVL  CLUB$FLAGS(R4),60$ ;
18 A6 06 D0 006A 252      MOVL  CSB$LOCAL CSID(R3), - ; Store local node CSID
56 68 A3 D0 006F 253      MOVL  CLUMBX$LOCAL CSID_L(SP) ;
18 A6 06 D0 006F 254 60$: MOVL  CSB$LOCAL SBTR3),R6 ; Address of local node system block
28 0073 255      MOVC3  #CLUMBX$SYSTEMID_L, - ; Store local system id
0079 256      SB$B SYSTEMID(R6), -
14 AE 44 A6 10 28 0079 257      MOVC3  CLUMBX$SYSTEMID_L(SP) ;
007F 258      #CLUMBX$SYSTEMID_L, - ; Store local system name
007F 259      SB$T NODENAME(R6), -
007F 260      CLUMBX$T_NODENAME_L(SP)
59 D5 007F 261      TSTL  R9 ; Remote node specified?
1A 13 0081 262      BEQL  80$ ; Branch if not and skip remote node data
05 60 A9 01 E1 0083 263      BBC    #CSB$V_MEMBER, - ; Branch if not a cluster member
24 AE 4C A9 D0 0088 264      MOVL  CSB$STATUS(R9),70$ ;
18 A6 06 D0 0088 265      MOVL  CSB$LOCAL CSID(R9), - ; Store remote node CSID
56 68 A9 D0 008D 266      MOVL  CLUMBX$LOCAL CSID_R(SP) ;
18 A6 06 D0 008D 267 70$: MOVL  CSB$LOCAL SBTR9),R6 ; Address of remote node system block
28 0091 268      MOVC3  #CLUMBX$SYSTEMID_R, - ; Store remote system id
0097 269      SB$B SYSTEMID(R6), -
30 AE 44 A6 10 28 0097 270      MOVC3  CLUMBX$SYSTEMID_R(SP) ;
009D 271      #CLUMBX$SYSTEMID_R, - ; Store remote system name
009D 272      SB$T NODENAME(R6), -
40 AE 00000000'GF 7D 009D 273      MOVC3  CLUMBX$T_NODENAME_R(SP) ;
00A5 274 80$: MOVQ  G^EXE$GQ_SYSTEMTIME, - ; Store current time
53 06 AE 3C 00A5 275      MOVZWL CLUMBX$W_LENGTH(SP),R3 ; Message size
54 6E 9E 00A9 276      MOVAB  (SP),R4 ; Message address
55 00000000'GF 9E 00AC 277      MOVAB  G^SYS$GLOPRMBX,R5 ; OPCOM mailbox UCB address
00B3 278      ..
00B3 279      R3 is message length
00B3 280      R4 is message address
00B3 281      R5 is mailbox UCB address
00B3 282      ..
00000000'GF 16 00B3 283      JSB  G^EXE$WRTMAILBOX ; Send message to OPCOM
03 50 E8 00B9 284      BLBS  R0,90$ ; Branch on success
57 10 C8 00BC 285      BISL2 #FLG M ERROR,R7 ; Set OPCOM message error flag
5E 00000048 8F C0 00BF 286 90$: ADDL2 #<CLUMBX$K_LENGTH+3>&^C3,SP ; Deallocate mailbox message buffer
02 A8 57 93 00C6 287      BITB  R7,MB_B_BRD(R8) ; Check for OPA0 broadcast
4F 13 00CA 288      BEQL  120$ ; Branch if no OPA0 broadcast
51 05 A8 9A 00CC 289      MOVZBL MB_T_MSG(R8),R1 ; Get length of message
51 21 C0 00D0 290      ADDL2 #PREFIX_SIZE+SB$SYSTEMID_L+2+3,R1 ; Add prefix, space+CR and
51 03 CA 00D3 291      BICL2 #3,R1 ; round to even number of longwords
56 5E D0 00D6 292      MOVL  SP,R6 ; Address to restore SP
5E 51 C2 00D9 293      SUBL2 R1,SP ; Allocate message construction buffer
6E 0000'CF 0C 28 00DC 294      MOVC3  #PREFIX_SIZE,W^PREFIX, - ; Copy prefix into message buffer
00E2 295      (SP)
51 05 A8 9A 00E2 296      MOVZBL MB_T_MSG(R8),R1 ; Initial message text size
06 A8 51 28 00E6 297      MOVC3  R1,MB_T_MSG+1(R8),(R3) ; Copy message text to stack
59 D5 00EB 298      TSTL  R9 ; Was CSB address specified?
12 13 00ED 299      BEQL  110$ ; Branch if no CSB
83 20 90 00EF 300      MOVB  #^A/ /,(R3)+ ; Store a space
55 68 A9 D0 00F2 301      MOVL  CSB$LOCAL SB(R9),R5 ; System Block address
55 44 A5 9E 00F6 302      MOVAB  SB$T NODENAME(R5),R5 ; Address of counted node name
54 85 9A 00FA 303      MOVZBL (R5),R4 ; Length of node name
```



```
63 65 54 28 00FD 306      MOVCL  R4,(R5),(R3)      ; Fill in node name
      83 OD 90 0101 307 110$: MOVBL  #CR,(R3)+      ; Insert and count final carriage return
      52 6E 9E 0104 308      MOVAB   (SP),R2      ; Message address
55 51 53 52 C3 0107 309      SUBL3   R2,R3,R1      ; Message length
      00000000'GF DE 010B 310      MOVAL  G^OPA$UCR0,R5      ; Get address of OPA0 UCB
      0112 311      :
      0112 312      : R1 is message length
      0112 313      : R2 is message address
      0112 314      : R5 is OPA0 UCB address
      0112 315      :
      00000000'GF 16 0112 316      JSB    G^IOC$BROADCAST      ; Broadcast it
      5E 56 D0 0118 317      MOVL   R6,SP      ; Deallocate message text buffer
      03FE 8F BA 011B 318 120$: POPR   #^M<R1,R2,R3,R4,R5,R6,R7,R8,R9> ; Restore registers
      05 011F 319      RSB
```

```
0120 321 .SBTTL SEND_JBCMSG - Send message to Job Controller
0120 322
0120 323
0120 324
0120 325
0120 326
0120 327
0120 328
0120 329
0120 330
0120 331
0120 332
0120 333
0120 334
0120 335
0120 336
0120 337
0120 338
0120 339
0120 340
0120 341
0120 342 JBCMSG$IZ= 2+SB$$_SYSTEMID+SB$$_NODENAME ; Length of job controller me
0120 343 SEND_JBCMSG::
0120 344 PUSH R1,R2,R3,R4,R5,R6 ; Save registers
0120 345 SUBL2 #<JBCMSG$IZ+3>R4,C3,SP ; Allocate message buffer
0120 346 MOVAB (SP),R3 ; Message buffer address
0120 347 MOVW #MSG$_SMBDON,(R3)+ ; Message type
0120 348 MOVL CSB$L_SB(R5),R6 ; Address of System Block
0120 349 MOVC3 #SB$$_SYSTEMID,- ; Copy system ID into message
0120 350 SB$$_SYSTEMID(R6),(R3)
0120 351 MOVC3 #SB$$_NODENAME,- ; Copy node name --
0120 352 SB$$_NODENAME(R6),(R3) ; R3 set by previous MOVC3
0120 353 MOVL #JBCMSG$IZ,R3 ; Set size of message
0120 354 MOVAB (SP),R4 ; Set address of message
0120 355 MOVAB G*SY$G$GL_JOBCTLMB,R5 ; Set addr. of Job controller's mailbox
0120 356 JSB G*EXE$WRTMAILBOX ; Write it to mailbox (ignore errors)
0120 357 ADDL2 #<JBCMSG$IZ+3>R4,C3,SP ; Restore stack
0120 358 POPR #<R1,R2,R3,R4,R5,R6> ; Restore all registers
0120 359 RSB ; Return
0120 360
0120 361
0120 362 .END
```

00000018

007E 8F BB  
5E 18 C2  
53 6E 9E  
83 09 B0  
56 68 A5 D0  
63 18 A6 06 28  
63 44 A6 10 28  
53 18 D0  
54 6E 9E  
55 00000000'GF 9E  
00000000'GF 16  
5E 18 C0  
007E 8F BA  
05

0120 344  
0124 345  
0127 346  
012A 347  
012D 348  
0131 349  
0136 350  
0136 351  
0138 352  
0138 353  
013E 354  
0141 355  
0148 356  
014E 357  
0151 358  
0155 359  
0156 360  
0156 361  
0156 362

CLUMESSAG  
Symbol table

## - Cluster Event Message Routines

C 7

16-SEP-1984 00:23:47 VAX/VMS Macro V04-00  
5-SEP-1984 04:06:59 [SYSLOA.SRC]CLUMESSAG.MAR;1Page 14  
(4)

```
$$$XX      = 0000000C
$$$YY      = 00000000
ACCPY MSG  = 00000023 RG 02
ADDNODE MSG = 0000027A RG 02
BELL       = 00000007
CLUSGL CLUB = ***** X 03
CLUSL_FLAGS = 0000001C
CLUSL_LOCAL CSB = 00000010
CLUSV_CLUSTER = 00000000
CLUSV_QUORUM = 0000001C
CLUMBSB_DS_VERSION = 00000004
CLUMBSB_FLAGS = 00000005
CLUMBSB_SYSTEMID_L = 0000000C
CLUMBSB_SYSTEMID_R = 00000028
CLUMBSK_DS_VERSION = 00000001
CLUMBSK_LENGTH = 00000048
CLUMBSK_ST_ABORT = 0000000A
CLUMBSK_ST_ADD = 0000000C
CLUMBSK_ST_CNX = 00000002
CLUMBSK_ST_COMPLETE = 0000001B
CLUMBSK_ST_DISKINVDAT = 00000016
CLUMBSK_ST_DISKRDERR = 00000014
CLUMBSK_ST_DISKTIMEOUT = 00000017
CLUMBSK_ST_DISKWRERR = 00000015
CLUMBSK_ST_DROPNODE = 0000000F
CLUMBSK_ST_FORNCLUS = 00000010
CLUMBSK_ST_FORNDISK = 0000001A
CLUMBSK_ST_GAINDISK = 00000013
CLUMBSK_ST_INIADD = 00000007
CLUMBSK_ST_INIFORM = 00000006
CLUMBSK_ST_INIRECNFIG = 00000008
CLUMBSK_ST_INQUORUM = 00000011
CLUMBSK_ST_LOSTCNX = 00000004
CLUMBSK_ST_LOSTDISK = 00000012
CLUMBSK_ST_MEMREQ = 00000009
CLUMBSK_ST_NEWSYS = 00000001
CLUMBSK_ST_NOQUORUM = 00000019
CLUMBSK_ST_QUORUM = 0000001C
CLUMBSK_ST_RECNCX = 00000003
CLUMBSK_ST_TIMCNX = 00000005
CLUMBSL_CSID_L = 00000008
CLUMBSL_CSID_R = 00000024
CLUMBSM_BRDCST = 00000001
CLUMBSQ_TIME = 00000040
CLUMBS$NODENAME_L = 00000010
CLUMBS$NODENAME_R = 00000010
CLUMBS$SYSTEMID_L = 00000006
CLUMBS$SYSTEMID_R = 00000006
CLUMBST_NODENAME_L = 00000014
CLUMBST_NODENAME_R = 00000030
CLUMBSW_LENGTH = 00000006
CLUMBSW_MSGTYPE = 00000000
CLUMBSW_SUBTYPE = 00000002
CNCT MSG = 00000023 RG 02
CNX$CONFIG CHANGE = 00000000 RG 03
CNXERROR MSG = 00000072 RG 02
COMPLETE MSG = 0000022A RG 02
```

```
CR = 0000000D
CSBSL_CSID = 0000004C
CSBSL_SB = 00000068
CSBSL_STATUS = 00000060
CSBSV_MEMBER = 00000001
CSB MSG = 0000000C RG 02
DEAD MSG = 000000BA RG 02
EXESGQ SYSTIME = ***** X 03
EXESWRTMAILBOX = ***** X 03
FAILIO MSG = 00000091 RG 02
FAILOVER MSG = 00000256 RG 02
FLG_M_ALWAYS = 0000000E
FLG_M_ERROR = 00000010
FLG_M_MEMBER = 0000000C
FLG_M_NONMEMBER = 00000002
FLG_M_NOQUORUM = 00000008
FLG_M_QUORUM = 00000004
FLG_V_ERROR = 00000004
FLG_V_NONMEMBER = 00000001
FLG_V_NOQUORUM = 00000003
FLG_V_QUORUM = 00000002
FORCLOS MSG = 000002E0 RG 02
GAINQUORUM MSG = 00000339 RG 02
IOC$BROADCAST = ***** X 03
IPL$SCS = 00000008
IPL$SYNCH = 00000008
IPL$TIMER = 00000008
JBCMSG$SIZ = 00000018
JOIN MSG = 000001DE RG 02
LF = 0000000A
LOSEQUORUM MSG = 00000315 RG 02
MB_B_BRD = 00000002
MB_B_CLS = 00000003
MB_B_LCL = 00000004
MB_T MSG = 00000005
MB_W CODE = 00000000
MEMREQ MSG = 00000135 RG 02
MSG$CLUMBS = 00000059
MSG$SMBDON = 00000009
OPASUCBO = ***** X 03
PREFIX = 00000000 R 02
PREFIX SIZ = 0000000C
QDCON MSG = 00000361 RG 02
QDDISCON MSG = 0000038E RG 02
QDFORCLUS MSG = 00000438 RG 02
QDINVDAT MSG = 00000410 RG 02
QDRDERR MSG = 000003B4 RG 02
QDTIMOUT MSG = 0000046D RG 02
QDWRROR MSG = 000003D3 RG 02
QDWRLERROR MSG = 000003F2 RG 02
QUORUM MSG = 0000019E RG 02
RCVSTS MSG = 000002BF RG 02
REACCPY MSG = 00000049 RG 02
RECNCY MSG = 00000049 RG 02
RECONFIG MSG = 0000016D RG 02
REQJOIN MSG = 00000100 RG 02
SBSB_SYSTEMID = 00000018
```



CLUMESSAG  
Symbol table

- Cluster Event Message Routines D 7

16-SEP-1984 00:23:47 VAX/VMS Macro V04-00 Page 15  
5-SEP-1984 04:06:59 [SYSLOA.SRC]CLUMESSAG.MAR;1 (4)

SBSS_NODENAME	=	00000010		
SBSS_SYSTEMID	=	00000006		
SBST_NODENAME	=	00000044		
SEND_JBCMSG		00000120	RG	03
SNDSTS_MSG		000002A1	RG	02
SYSSGL_JOBCTLMB		*****	X	03
SYSSGL_OPRMBX		*****	X	03
TRYFORM_MSG		000000D7	RG	02
UNLOCK_MSG		00000200	RG	02

-----  
! Psect synopsis !  
-----

PSECT name	Allocation	PSECT No.	Attributes															
. ABS .	00000000 ( 0.)	00 ( 0.)	NOPIC	USR	CON	ABS	LCL	NOSHR	NOEXE	NORD	NOWRT	NOVEC	BYTE					
\$ABSS	00000000 ( 0.)	01 ( 1.)	NOPIC	USR	CON	ABS	LCL	NOSHR	EXE	RD	WRT	NOVEC	BYTE					
\$\$\$060	00000499 ( 1177.)	02 ( 2.)	NOPIC	USR	CON	REL	LCL	NOSHR	EXE	RD	WRT	NOVEC	LONG					
\$\$\$100	00000156 ( 342.)	03 ( 3.)	NOPIC	USR	CON	REL	LCL	NOSHR	EXE	RD	WRT	NOVEC	LONG					

-----  
! Performance indicators !  
-----

Phase	Page faults	CPU Time	Elapsed Time
Initialization	29	00:00:00.04	00:00:00.52
Command processing	108	00:00:00.44	00:00:04.47
Pass 1	273	00:00:04.61	00:00:16.86
Symbol table sort	0	00:00:00.45	00:00:02.50
Pass 2	122	00:00:01.25	00:00:03.54
Symbol table output	16	00:00:00.07	00:00:00.07
Psect synopsis output	2	00:00:00.01	00:00:00.02
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	552	00:00:06.88	00:00:27.98

The working set limit was 1500 pages.  
56017 bytes (110 pages) of virtual memory were used to buffer the intermediate code.  
There were 30 pages of symbol table space allocated to hold 470 non-local and 12 local symbols.  
362 source lines were read in Pass 1, producing 19 object records in Pass 2.  
16 pages of virtual memory were used to define 14 macros.

-----  
! Macro library statistics !  
-----

Macro library name	Macros defined
_\$255\$DUA28:[SYSLOA.OBJ]CLUSTER.MLB;1	1
_\$255\$DUA28:[SYS.OBJ]LIB.MLB;1	4
_\$255\$DUA28:[SYSLIB]STARLET.MLB;2	5
TOTALS (all libraries)	10

492 GETS were required to define 10 macros.

There were no errors, warnings or information messages.

CLUMESSAG  
VAX-11 Macro Run Statistics

- Cluster Event Message Routines E 7

16-SEP-1984 00:23:47 VAX/VMS Macro V04-00  
5-SEP-1984 04:06:59 [SYSLOA.SRC]CLUMESSAG.MAR;1

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(4)

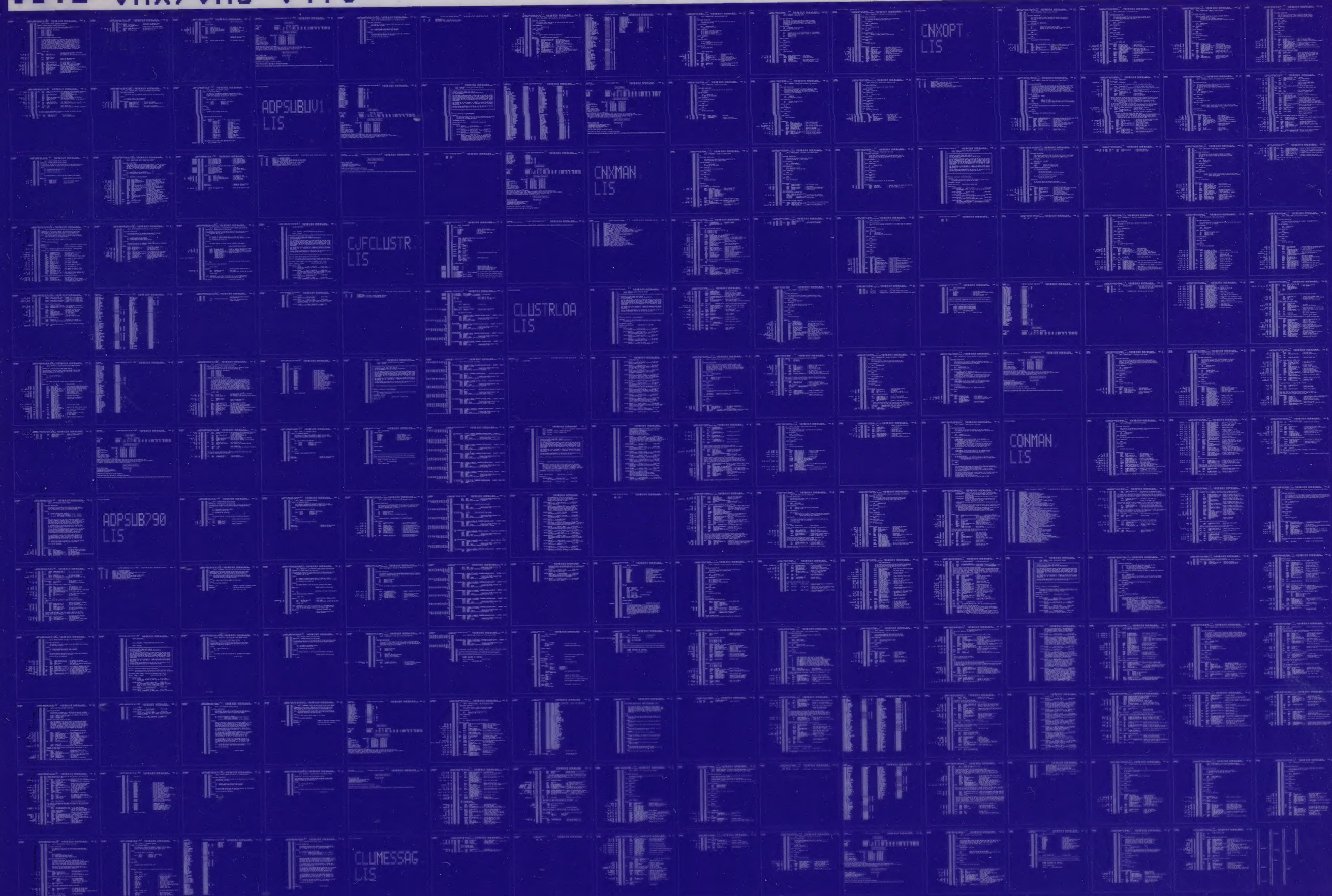
MACRO/LIS=LISS:CLUMESSAG/OBJ=OBJ\$:CLUMESSAG MSRC\$:CLUMESSAG/UPDATE=(ENH\$:CLUMESSAG)+EXECML\$/LIB+LIB\$:CLUSTER/LIB

CN)  
Tab



0392 AH-BT13A-SE  
VAX/VMS V4.0

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CLMESSAG  
LIS